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| 09/734,618      | 12/13/2000  | Koichi Takizawa      | 2611-0137P          | 3634             |

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EXAMINER

HOM, SHICK C

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2666

DATE MAILED: 06/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

14

**Office Action Summary**

Application No.

09/734,618

Applicant(s)

TAKIZAWA ET AL.

Examiner

Shick C Hom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 December 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15 is/are rejected.
- 7) ☒ Claim(s) 1-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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**DETAILED ACTION**

***Drawings***

1. Figures 8 and 9 should be designated by a legend such as -- Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because a brief descriptive label must be provided for each numbered items; i.e. in Figs. 1 and 4, provide labels for signal 111, serial-parallel conversion circuit 101, 105, tributary signals 112a-112n, 114a-114n, delay circuit 103, parallel-serial conversion circuit 104, 109, high-speed signal 113, transmission path 110, data replacement control signal 322, item numbers 321, 309. In Fig. 2, correct labels 114a-114n, because it appears that tributary

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signals 114a-114n are output from the tributary synchronization circuit 106 as in Fig. 1 and not input as shown in Fig. 2. In Figs. 1-2, 4-5, and 7, correct typo by deleting "circiut" and insert ---circuit---. In Fig. 8, provide labels for multiplexed signal 705, bit serial-parallel conversion circuit 701, byte serial-parallel conversion circuit 702, frame pattern detection circuits 731-734, synchronism control circuit 704, bit shift control circuit 708, logical product circuit 709. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the

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examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

4. Claims 1-15 are objected to because of the following informalities: In claim 1 line 10, claim 9 line 10, the words "a plurality of low-speed tributary signals" seem to refer back to "a plurality of low-speed tributary signals" recited in claim 1 line 3 and claim 9 line 3-4, respectively. If this is true, it is suggested changing "a plurality of low-speed tributary signals" to ---the plurality of low-speed tributary signals---. In claim 1 line 13, claim 2 lines 16, 20, 41-42, claim 4 line 17, 21, 46, claim 9 line 13, claim 10 line 22-23, claim 12 line 27-28, claim 15 line 26, the words "a high-speed serial signal" seem to refer back to "a high-speed serial signal" recited in claim 1 line 5, claim 9 line 6, claim 15 line 6, respectively.

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If this is true, it is suggested changing "a high-speed serial signal" to ---the high-speed serial signal---. In claim 2 line 7, 23-24, 35-36, claim 3 line 5, 8, claim 4 line 7, 12, 26, 38-39, claim 5 line 2, claim 6 line 6, claim 7 lines 4-5, claim 8 line 4-5, claim 10 line 5-6, 17-18, claim 11 line 3-4, 7, claim 12 line 8-9, 19-20, claim 13 line 2, claim 14 line 5, claim 15 line 16-17, the words "a respective tributary signal" seem to refer back to "a respective tributary signal" recited in claim 1 line 20, claim 9 line 15-16, claim 15 line 12-13, respectively.

If this is true, it is suggested changing "a respective tributary signal" to ---the respective tributary signal---.

In claim 2 line 8, the words "a frame" seem to refer back to "a frame" recited in claim 1 line 4. If this is true, it is suggested changing "a frame" to ---the frame---. In claim 2 line 31, 40-41, claim 4 line 44-45, claim 10 line 21-22, the words "a respective one" seem to refer back to "a respective one" recited in claim 2 lines 14-15, claim 4 line 15, claim 10-13-14, respectively. If this is true, it is suggested changing "a respective one" to ---the respective one---. In claim 2 line 31, the words "a tributary synchronization" seem to refer back to "a tributary synchronization" recited in claim 1 line 11. If this is true, it is suggested changing "a tributary synchronization" to ---the tributary synchronization---. In

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claim 4 line 5-6, 22, claim 10 line 4, claim 11 line 4, claim 15 line 10-11, the words "a plurality of tributary signals" seem to refer back to "a plurality of tributary signals" recited in claim 1 line 3, claim 9 line 3-4, claim 15 line 4, respectively. If this is true, it is suggested changing "a plurality of tributary signals" to ---the plurality of tributary signals---. In claim 2 line 8, the words "a frame" seem to refer back to "a frame" recited in claim 1 line 4. If this is true, it is suggested changing "a frame" to ---the frame---. In claim 13 line 9-10, the words "a tributary ID signal" seem to refer back to "a tributary ID signal" recited in claim 12 line 12. If this is true, it is suggested changing "a tributary ID signal" to ---the tributary ID signal---. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 15 line 13 which recite "the frame bit" lacks clear antecedent basis because no frame bit have been previously

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recited in the claim and therefore the limitation is not clearly understood.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Graves (4,667,324).

Regarding claim 15:

Graves discloses the data transmitter which transmits a high-speed serial signal to be sent to a transmission path, which serial signal is obtained by multi-dividing a transmission signal into a plurality of low-speed tributary signals, forming a frame for every tributary signal (see col. 3 lines 17-45 which recite the transmission system including the multiplexer for multiplexing bit streams from tributaries into a multiplexed bit stream divisible into frames clearly reads on transmitting having the high-speed serial signal on a transmission path where



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the signal is obtained from low-speed tributary signals), thereafter multiplexing the tributary signals into a high-speed serial signal and transmitting the high-speed serial signal through the transmission path (see col. 5 lines 42-59 which recite the serial stream being sent by high speed transmission from the transmitter to the receiver), the data transmitter comprising: a serial-parallel conversion circuit which multi-divides the transmission signal into a plurality of tributary signals (see col. 9 lines 8-21 which recite the use of the serial-to-parallel converter); a coding circuit which, for a respective tributary signal, forms the frame containing the frame bit and tributary ID information for identifying the tributary signal (see col. 1 line 60 to col. 2 line 17 which recite the PCM coded signals, the use of the synchronization bit, and the channels CH1 to CH24 which reads on the tributary ID information for identifying the tributary signal); a bit synchronization circuit (see col. 3 lines 17-45 which recite the use of the synchronization bit) which, for a respective tributary signal for which the frame is formed by the coding circuit, detects a phase slip of the tributary signal relative to a common clock signal between tributary signals and delaying the tributary signal in accordance with the detected phase slip to thereby perform a bit synchronization (see col. 7 line 13 to

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col. 8 line 13 which recite storing and inserting bits for synchronization clearly reads on the step of delaying the tributary signal); and a parallel-serial conversion circuit which multiplexes the tributary signals, of which a respective one is processed for the bit synchronization by the delay circuit, into a high-speed serial signal to be sent to the transmission path (see col. 5 lines 50-59 which recite the use of parallel/serial converter to form a stream for the high speed transmission).

#### ***Allowable Subject Matter***

8. Claims 1-14 would be allowable if rewritten or amended to overcome the objections set forth in this Office action.

#### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schaffter discloses a time slot interchanger.

Castagna et al. disclose a method and apparatus for transmitting data in a high speed, multiplexed data communication system.

Takizawa et al. disclose data transmission and reception system, data transmitter and data receiver.

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10. Any response to this nonfinal action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed to:

(703) 872-9306, (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal  
Park II, 2121 Crystal Drive, Arlington. VA., Sixth  
Floor (2600 Receptionist at (703) 305-4750).

Any inquiry concerning this communication or earlier  
communications from the examiner should be directed to Shick Hom  
whose telephone number is (703) 305-4742. The examiner's  
regular work schedule is Monday to Friday from 8:00 am to 5:30  
pm EST and out of office on alternate Friday.

If attempts to reach the examiner by telephone are  
unsuccessful, the examiner's supervisor, Seema Rao, can be  
reached at (703) 308-5463.

Any inquiry of a general nature or relating to the status  
of this application or proceeding should be directed to the

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Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

SH

June 16, 2004

A handwritten signature in dark ink, appearing to be 'MM' with a long, sweeping horizontal stroke extending to the left.

DANSTON  
TAMM/BANNER